

### **REMARKS**

Applicants appreciate the Examiner's thorough consideration provided in the present application. Claims 1-15 and 18-20 are now present in the application. Claim 20 has been added. Claims 1 and 12 are independent. Reconsideration of this application, as amended, is respectfully requested.

#### **Priority Under 35 U.S.C. §119**

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. §119, and receipt of the certified priority document.

#### **Claim Rejections Under 35 U.S.C. § 103**

Claims 1, 5-7, 9 and 10 are rejected under 35 USC §103(a) as being unpatentable over Yoshito (JP Publication Number 2002-027249) in view of Burgess et al. (US Publication Number 2004/0131115 A1, hereinafter "Burgess"). Claims 2-4, 8, 11-15, 18 and 19 are rejected under 35 USC §103(a) as being unpatentable over Yoshito in view of Burgess and further in view of Hattori, (US Publication Number 2003/0123093 A1). These rejections are respectfully traversed.

Complete discussions of the Examiner's rejections are set forth in the Office Action, and are not repeated herein. Applicants respectfully submit that independent claims 1 and 12 as previously presented clearly defines over the present invention over the references relied on by the Examiner.

In particular, independent claim 1 recites a combination of steps including "*dividing an image to be processed into a plurality of blocks*"; filling an initial region of a block according to

an error diffusion method; performing error diffusion in order for each of the pixels in the block; *reserving the pixels that are not processed in the final region of the block to the next adjacent block*; and performing the error diffusion method for each of the blocks to complete halftone processing.”

Independent claim 12 recites a combination of elements including “an image processing chip, which executes the error diffusion; an internal memory, which is inside the chip to store the block to be processed and the image data filling in the initial region of the block according to the error diffusion method for the image processing chip to process error diffusions, *the filling image data being all pixels not processed in the final region of the block to the adjacent blocks*; and an external memory, which is outside the chip for providing the internal memory with the pixels needed to fill the block.”

Applicants respectfully submit that the above combinations of steps and elements as set forth in independent claims 1 and 12 are not disclosed nor suggested by the references relied on by the Examiner.

Specifically, the claimed invention is directed to a memory management method for error diffusion, and a halftone processing module for error diffusion for dividing an image into a plurality of blocks and using an error diffusion method to perform halftone processing. The Examiner correctly acknowledges that Yoshito fails to teach a method for reserving the pixels that are not processed in the final region of the block to the next adjacent block for later processing; however, the Examiner turns to rely on Burgess asserting that Burgess teaches this limitation and cure the deficiency of Yoshito. Applicants respectfully disagree.

Referring to the Abstract of Burgess, Burgess is directed to a method and apparatus for transmitting, multicasting or broadcasting video signals from a video source to one or more remotely located computers and video client. Applicants respectfully submit that the Burgess reference is not directed to analogous art because one of ordinary skill in this art would not be lead to use Burgess. In addition, Yoshito is related to the field of the halftone process, and since Burgess is not even directed to solving the same problem as is Yoshita, it is submitted that there is no suggestion in the references to lead one skilled in the art to combine Yoshita and Burgess to achieve the present invention.

The Examiner may not pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve Inc., 796 F.2d 443, 448, 230 USPQ 416, 419 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987) and In re Kamm, 452 F.2d 1052, 1057, 172 USPQ 298, 301-2 (CCPA 1972). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). In this case, Applicants respectfully submit that the Office Action fails to present any persuasive evidence of such a motivating force.

In addition, the Examiner relies on paragraphs [0094] and [0135]-[0137] of Burgess asserting that those portions in Burgess teaches a method for reserving the pixels that are not processed in the final region of the block to the next adjacent block for later processing as set forth in the present invention. However, Applicants respectfully disagree and submit that a

careful review of those portions in Burgess relied on by the Examiner indicates that those portions in Burgess have nothing to do with the above-mentioned limitation set forth in claim 1. It is emphasized that in the present invention, a step is provide to divide a block into at least two regions, i.e. an initial region and a final region. And then, the pixels in the final region are not processed is reserved to the next adjacent part. Actually, Burgess nowhere teaches or suggests that unprocessed pixels in the “final region” is reserved to the next adjacent block as set forth in the present invention. Therefore, Applicants respectfully submit that even if, *arguendo*, Yoshito and Burgess were combined, the combination would still fail to achieve the present invention set forth in independent claims 1 and 12, because Burgess fails to teach the above-mentioned feature set forth in independent claims 1 and 12 and thus fails to cure the deficiencies of Yoshito. With regard to the Examiner’s reliance on Hattori, this reference also fails to disclose the above-mentioned features set forth in independent claims 1 and 12.

At least for the above reasons, Applicants respectfully submit that independent claims 1 and 12 clearly define the present invention over the references relied on by the Examiner.

In addition, claims 2-15, 18 and 19 depend, either directly or indirectly, from independent claims 1 and 12, and are therefore allowable based on their respective dependence from independent claims 1 and 12, which are believed to be allowable.

In view of the above amendments to the claims and remarks, Applicants respectfully submit that claims 1-15, 18 and 19 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103 are respectfully requested.

### **Additional Claims**

Claim 20 has been added for the Examiner's consideration. Support for new claim 20 can be found at least at, for example, page 5, lines 13-24 of the Specification as originally filed. Thus, no new matter has been added.

Applicants respectfully submit that claim 20 depends directly from independent claim 1, and is therefore allowable based on its dependence from independent claim 1, which is believed to be allowable as well as due to the additional novel features set forth therein. Specifically, claim 20 recites that "the initial region is filled with a initial filling region, and if the image being processed is a part of a whole image, the initial filling region is filled with an adjacent image, otherwise, the initial filling region is filled with empty pixels." Applicants respectfully submit that the references relied on by the Examiner fails to teach this feature recited in claim 20, and thus for this additional reason, new claim 20 clearly defines over the references relied on by the Examiner.

Favorable consideration and allowance of claim 20 are respectfully requested.

### **CONCLUSION**

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.147; particularly, extension of time fees.

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Respectfully submitted,

By

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